State of Alaska
ALASKA RETIREMENT MANAGEMENT BOARD
Relating to Real Assets Annual Investment Plan

Resolution 2022-11

WHEREAS, the Alaska Retirement Management Board (Board) was established by law to serve as trustee to the assets of the State's retirement systems; and

WHEREAS, under AS 37.10.210-220, the Board is to establish and determine the investment objectives and policy for each of the funds entrusted to it; and

WHEREAS, AS 37.10.071 and AS 37.10.210-220 require the Board to apply the prudent investor rule and exercise the fiduciary duty in the sole financial best interest of the funds entrusted to it and treat beneficiaries thereof with impartiality; and

WHEREAS, the Board contracts an independent consultant to provide experience and expertise in asset allocation and other investment matters to come before the Board; and

WHEREAS, the Board has established an asset allocation for the funds that considers earnings and liabilities on a current as well as a future basis; and

WHEREAS, the Board has authorized investments in Real Assets for the Public Employees' Retirement System, Teachers' Retirement System, and Judicial Retirement System, including investments for those systems in the State of Alaska Retirement and Benefits Plans Trust; and

WHEREAS, the Board will establish and on an annual basis review an investment plan for Real Assets asset class.

NOW THEREFORE BE IT RESOLVED THAT THE ALASKA RETIREMENT MANAGEMENT BOARD adopt the Real Assets Annual Investment Plan for Fiscal Year 2023, attached hereto and made a part hereof.

DATED at Anchorage, Alaska this 16ᵗʰ day of September, 2022.

_____
Chair

ATTEST:

_____
Secretary

STATE OF ALASKA
DEPARTMENT OF REVENUE

ALASKA RETIREMENT MANAGEMENT BOARD

Real Assets
Fiscal Year 2023 Annual Investment Plan

September 2022

Steve Sikes, CFA, CPA
Manager of Real Assets

Alaska Retirement Management Board
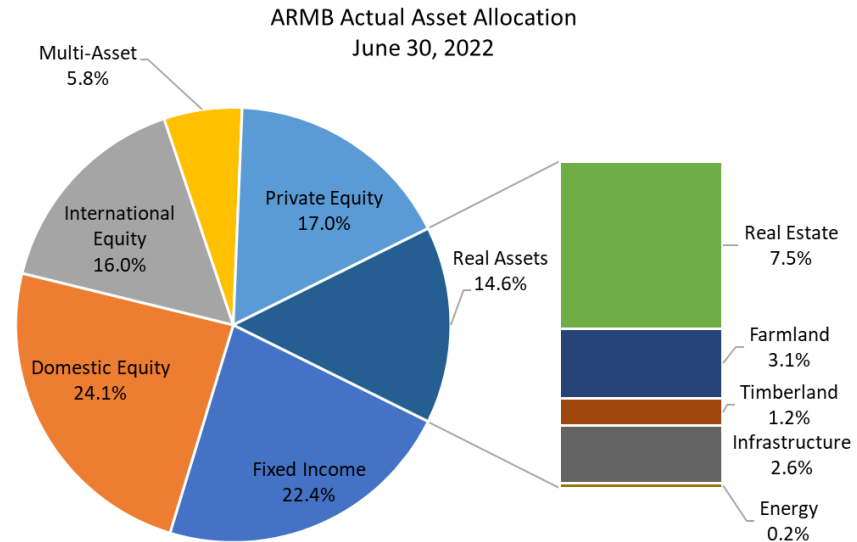
Real Assets Portfolio

<u>ARMB Portfolio Role</u>: Diversify the portfolio while providing attractive total returns, inflation protection, and income.

<u>Strategy</u>: Seek to establish exposure to real assets through both public and private assets primarily in core investments.

<u>Return Expectations</u>: Long-term performance expectations for real assets are to have net-of-fee performance between public equities and fixed income over rolling 6-year periods.

ARMB Actual Asset Allocation June 30, 2022

- Multi-Asset 5.8%
- Private Equity 17.0%
- Real Assets 14.6%
- International Equity 16.0%
- Domestic Equity 24.1%
- Fixed Income 22.4%
- Real Estate 7.5%
- Farmland 3.1%
- Timberland 1.2%
- Infrastructure 2.6%
- Energy 0.2%

Real Assets represented $4.5 billion of ARMB's $30.8 billion of total defined benefit assets as of June 30, 2022. Callan Real Assets Consulting values are used. Numbers may not sum due to rounding.

<u>Benchmark</u>: At the asset class level, a custom benchmark of 35% NFI-ODCE, 15% FTSE NAREIT Equity Index, 25% NCREIF Farmland Index, 10% NCREIF Timberland Index, 15% CPI+4 is employed.

<u>Structure</u>: The Real Assets portfolio is primarily a collection of private, illiquid assets requiring long-term holding periods and an investment in publicly traded REITs.

Alaska Retirement Management Board

Fiscal Year 2023 ARMB Asset Allocation

- What do we expect to achieve? How does it fit?

Customized 10-Year ARMB Capital Market Projections – PERS & TRS Target

ARMB Asset Allocation Model 2022-2031

Asset Class	Target Weight	PROJECTED RETURN		PROJECTED RISK	Projected Yield
		1-Year Arithmetic	10-Year Geometric Return	Annualized Standard Deviation	
Public Equities	**45.0%**				
Broad US Equity	27.0%	8.00%	6.60%	17.95%	1.70%
Global Ex-US Equity	18.0%	8.70%	6.80%	20.70%	2.55%
Fixed Income	**21.0%**				
ARMB Core Fixed Income	21.0%	1.75%	1.70%	3.55%	2.82%
Multi-Asset	**6.0%**				
Multi-Asset	6.0%	5.65%	5.20%	10.80%	2.40%
Private Equity	**14.0%**				
Private Equity	14.0%	11.45%	8.00%	27.60%	0.00%
Real Assets	**14.0%**	**6.90%**	**6.15%**	**13.60%**	**4.35%**
Real Estate	4.90%	6.60%	5.75%	14.20%	4.40%
Timber	1.40%	6.45%	5.40%	15.60%	3.70%
Farmland	3.50%	6.60%	5.50%	15.45%	4.25%
Private Infrastructure	2.10%	7.10%	6.10%	15.45%	4.60%
REITs	2.10%	8.15%	6.20%	20.70%	4.65%
Cash Equivalents	**0.0%**				
Cash Equivalents	0.0%	1.20%	1.20%	0.90%	1.20%
Inflation			2.25%	1.50%	
Total Fund	**100.0%**	**7.00%**	**6.24%**	**13.72%**	**2.27%**

Projection set customized to reflect specific ARMB strategies:

- Real assets, multi-asset and fixed income

Current target projected to generate a return of 6.24% compounded over 10 years, at a risk (standard deviation) of 13.72%. This return is comparable to that projected last year for the same target (6.23%).

Source: Callan, LLC June 2022 ARMB presentation

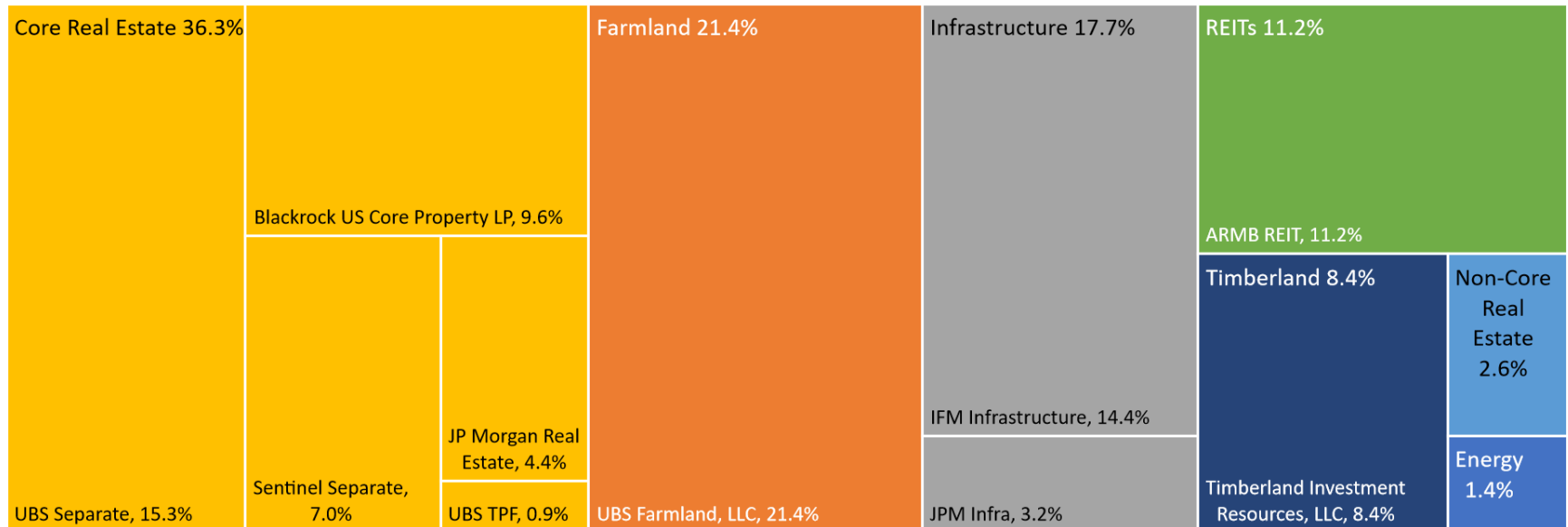# Alaska Retirement Management Board

Actual vs. Target Weights

- Long-term sector target allocations are developed with Callan, ARMB's Real Assets consultant. The asset class sector target weights remain unchanged since 2019.

- As of June 30, the Real Assets portfolio was largely in-line with targets. Underweight in REITs is offset against exposure to core and non-core real estate.

as of June 30, 2022	Actual	Target	Difference
Core Real Estate	37.3%	35.0%	2.3%
Non-Core Real Estate	2.6%	0.0%	2.6%
REITS	11.2%	15.0%	-3.8%
Farmland	21.4%	25.0%	-3.6%
Timberland	8.4%	10.0%	-1.6%
Infrastructure	17.7%	15.0%	2.7%
Energy	1.4%	0.0%	1.4%
Total Real Assets	14.6%	14.0%	0.6%

ARMB Real Assets Porfolio
June 30, 2022, Market Value $4.5 Billion, Chart % are of Total Real Assets

Alaska Retirement Management Board

ARMB Performance vs. Benchmarks

- The Real Assets portfolio returned 14.39% net in Fiscal Year 2022 compared to the target return of 14.82%.

- Most sectors performed within reasonable ranges around benchmark expectations. Non-core real estate returns underperformed on 1-year basis but longer-term results are closer to the benchmark.

- Performance has met objectives of providing diversification and producing returns between public equities and fixed income.

as of June 30, 2022 (net of fees)	Qtr	1yr	6yr	10yr
Core	3.63%	29.48%	10.20%	10.41%
NCREIF ODCE	4.54%	28.31%	9.10%	10.15%
Non-Core	0.97%	10.55%	7.92%	10.13%
NCREIF ODCE +1.5%	4.87%	29.81%	10.61%	11.66%
REIT	-14.67%	-5.78%	5.53%	8.22%
FTSE NAREIT All Equity	-14.68%	-5.89%	5.63%	8.34%
Farmland	0.59%	9.69%	4.88%	6.32%
NCREIF Farmland (80/20 Blend)	1.98%	12.39%	6.57%	7.12%
Timberland	1.27%	9.69%	3.37%	4.61%
NCREIF Timberland	1.87%	12.01%	4.16%	4.44%
Infrastructure	2.40%	12.20%	10.60%	-
CPI+4%	3.97%	13.06%	7.51%	-
ARMB Real Assets	-0.13%	14.39%	7.27%	7.65%
ARMB Real Assets Target	0.83%	14.82%	6.88%	7.74%
Russell 3000	-16.70%	-13.87%	11.88%	12.57%
Bloomberg Barclays Aggregate	-4.69%	-10.29%	0.68%	1.54%
CPI	3.06%	9.06%	3.50%	2.59%

Source: Callan Real Assets Quarterly Report June 30, 2022, Callan PEP

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Fiscal Year 2022 Accomplishments

- Implemented mortgage debt program in the U.S real estate separate account program. A total of five properties were mortgaged returning $207.2 million in capital to ARMB at a weighted interest rate of 2.30% and weighted maturity of just under 5 years.

- Acquired three multifamily investments in the UBS and Sentinel separate account portfolios. Two of the properties are new construction and all the properties provide complimentary diversification benefits to the existing portfolio.

- Conducted a core open-end search but effort was paused due to asset class drifting to overweight condition as year evolved. Exercise was still very valuable in forming views on possible future investments.

- Staff continues to consider the non-qualified fund option for JPM Strategic Property Fund to harmonize real estate exposure between pension and healthcare/DC trusts.

Lansdale Station
Lansdale, PA

3000 Sage
Houston, TX

BLVD
Revere Beach, MA

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Real Estate Portfolio

- Two core separate account managers make investments on a discretionary basis within the parameters defined by ARMB's guidelines and annual investment plan up to approved allocations. These investments represent 44% of the real estate portfolio and are currently comprised of 17 assets within the apartment, industrial, office, and retail sectors across the U.S. ARMB owns 100% interest in these assets. An additional apartment asset was purchased after the fiscal year end.

- Three core open-end commingled funds make investments on a discretionary basis according to each fund's strategy. These funds represent 29% of the real estate portfolio and offer well diversified exposure across asset types, markets, and size. ARMB owns units in these funds along with other institutional investors.

- Fund investments with three non-core commingled fund managers represent the majority of non-core real estate strategies. Non-core funds represent 5% of the real estate portfolio.

- The remaining 22% of the real estate portfolio is a passive publicly traded REIT equity portfolio invested internally by staff.

Real Estate Portfolio
June 30, 2022

- Net Asset Value: $2.3 billion

- Number of Assets: 17 + commingled fund interests

- Core Structure: 2 separate accounts, 3 open-end funds

- Non-Core Structure: 14 commingled funds

- U.S. Domestic REITs – FTSE NAREIT All Equity

ARMB Real Estate Weights as of June 30, 2022

- REITS 22%
- Private Non-Core Real Estate 5%
- Private Core Real Estate 73%
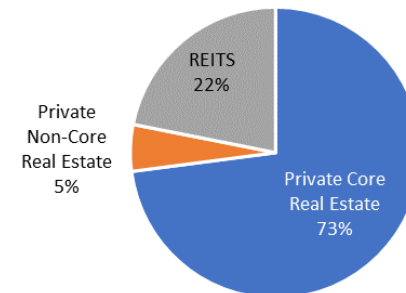
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Real Estate – Performance

- Core real estate returns as reflected by the NCREIF Property Index continue to show strong results through June 30, 2022, particularly in apartments and industrial.

- Net operating income (NOI) growth has been robust and should help offset rising cap rates and other possible valuation headwinds.
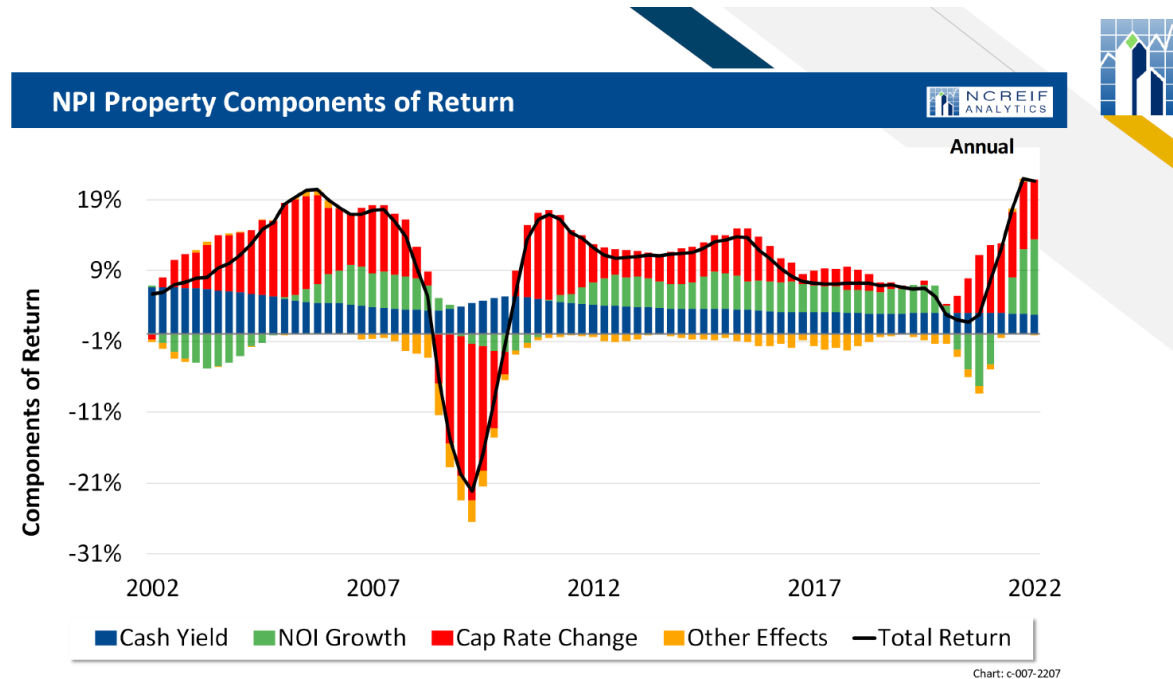
Source: NCREIF

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Real Estate – Outlook

NCREIF Property Index Annual Total Returns by Property Type

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2Q22 YTD
20.5%	-4.1%	-11.0%	18.2%	15.5%	11.6%	12.9%	13.4%	15.3%	12.3%	13.0%	14.3%	13.4%	11.8%	43.3%	17.5%
18.1%	-5.8%	-16.9%	13.1%	14.6%	11.2%	12.3%	13.1%	14.9%	9.0%	7.0%	7.6%	6.6%	1.8%	19.9%	9.3%
15.9%	-6.5%	-17.5%	12.6%	14.3%	10.7%	11.0%	11.8%	13.3%	8.0%	6.2%	6.9%	6.4%	1.6%	17.7%	8.7%
15.0%	-7.3%	-17.9%	11.7%	13.8%	10.5%	10.4%	11.5%	13.2%	7.3%	6.0%	6.7%	5.5%	1.6%	6.1%	4.0%
13.5%	-7.3%	-19.1%	9.4%	13.8%	9.5%	9.9%	11.1%	12.5%	6.2%	5.7%	6.1%	3.5%	-7.5%	5.5%	3.6%
11.4%	-9.4%	-20.4%	9.0%	11.8%	8.2%	7.7%	10.3%	12.0%	4.7%	4.9%	2.2%	1.9%	-25.6%	4.2%	2.2%

Source: NCREIF

NPI	Industrial	Apartment	Retail	Hotel	Office

- Industrial and Apartment sectors are expected to continue to benefit from positive trends in logistics and housing demand. Retail and Office have higher uncertainty and lower expected returns.

- ARMB's portfolio has benefitted from being overweight apartment and industrial.

Forecasts project continuation (2022-2024)

| Sector	Current Cap Rate		Dividend Pay-Out Ratio		Dividend Yield		NOI Growth		Cap Rate Shift Effect		Total Return	Exit Cap Rate
Industrial	4.0	x	69.0	=	2.6	+	7.8	+	2.0	=	12.5	3.9
Apartment	3.6	X	74.5	=	2.6	+	5.4	+	-0.2	=	7.9	3.6
Retail	4.5	X	70.0	=	3.1	+	3.9	+	-1.5	=	5.6	4.7
Office	4.6	X	56.9	=	2.7	+	2.8	+	-0.4	=	5.1	4.7
NPI	4.2	X	66.8	=	2.7	+	4.8	+	0.0	=	7.7	4.2

Source: BlackRock, as of March 31, 2022

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Real Estate – Outlook

- NCREIF ODCE Index has changed substantially as a result of the changing macro trends.

ODCE SECTOR ALLOCATION IN RECENT HISTORY (AS OF Q2 2022)
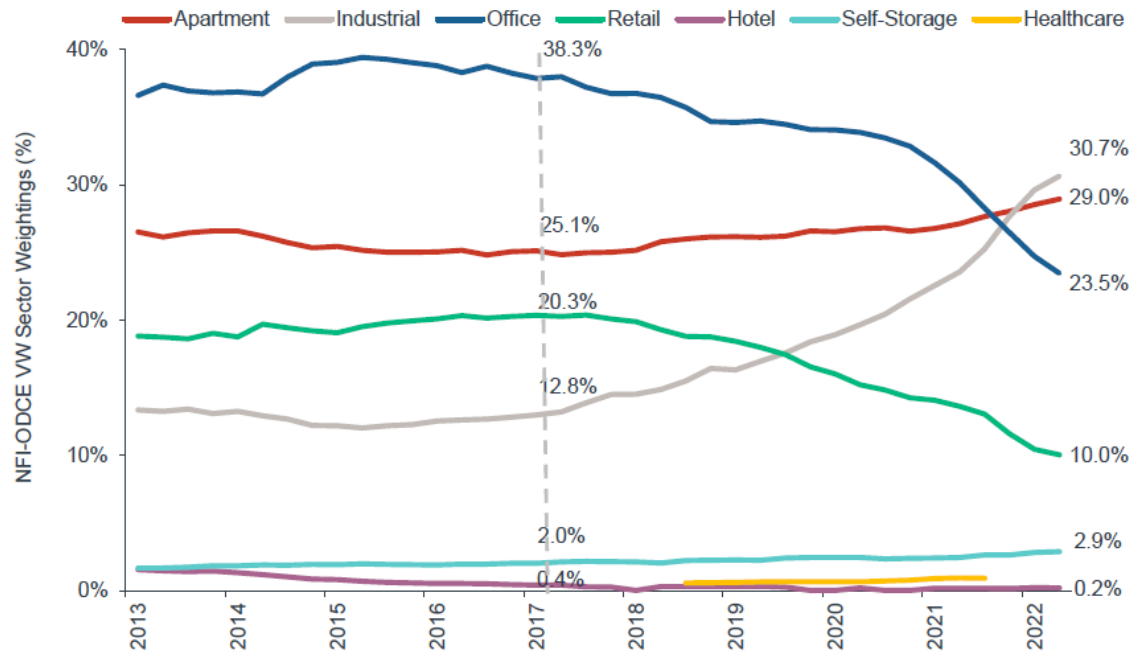
Source: NCREIF, Clarion Partners Investment Research, Q2 2022.
Note: ODCE = NCREIF Open-End Diversified Core Equity Index. Past performance is not indicative of future results. Please see the important disclosures at the end of this presentation.

Source: Clarion Partners Investment Research, NCREIF

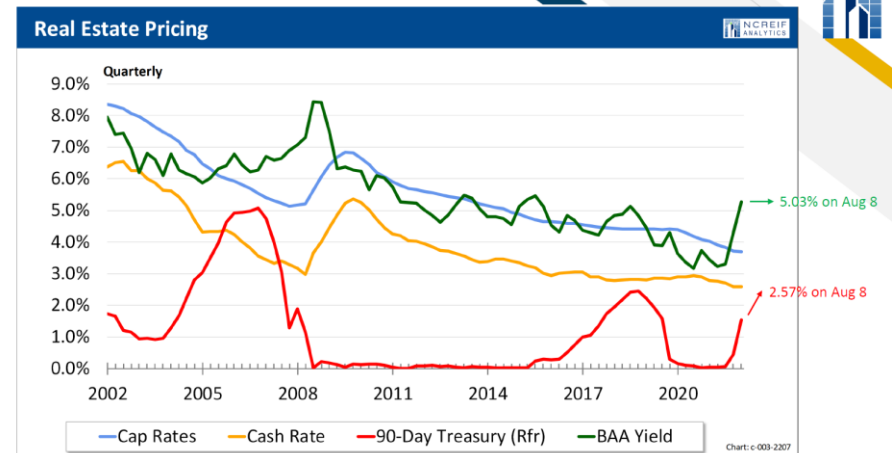# Alaska Retirement Management Board

Real Estate – Outlook

- NCREIF cap rates have yet to meaningfully respond to higher U.S. Treasury yields.

- Continued expected rent growth and inflation hedge expectations provide some cushion but cap rates will likely move higher as interest rates increase creating downward pressure on valuations.

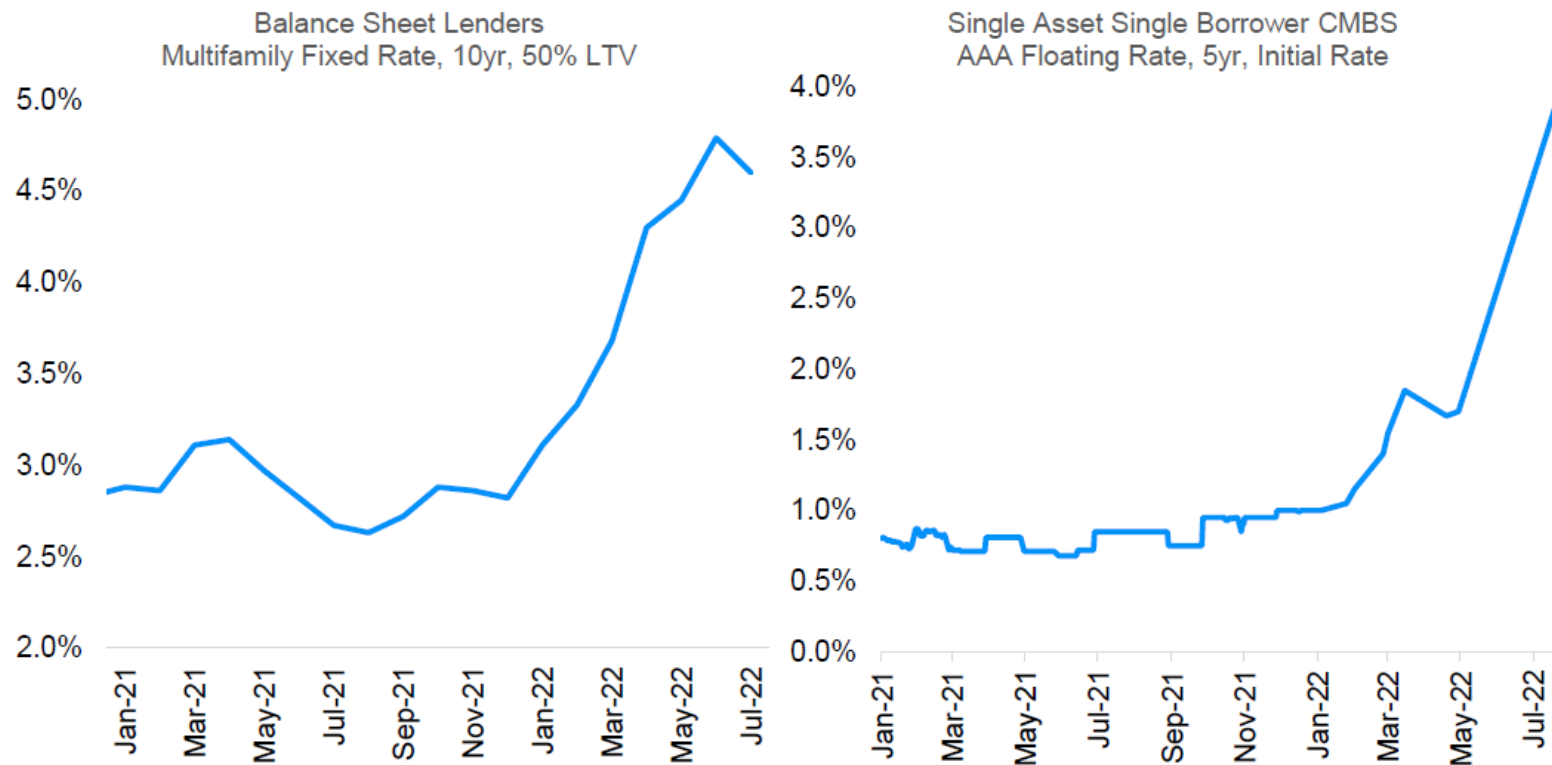Through last year…
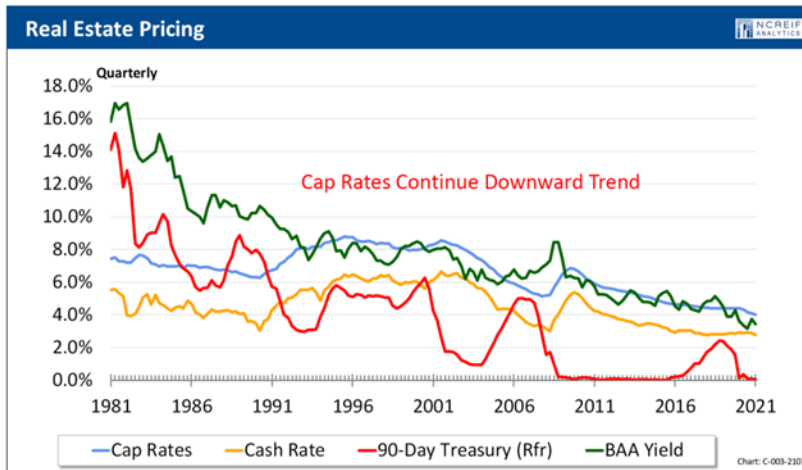
Source: NCREIF

Updated for this year …

Source: NCREIF

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Real Estate – Outlook

- Debt costs have risen across the real estate lending spectrum creating "negative leverage" in many cases where debt interest rate costs are above property cap rates.

Balance Sheet Lenders
Multifamily Fixed Rate, 10yr, 50% LTV

Single Asset Single Borrower CMBS
AAA Floating Rate, 5yr, Initial Rate

Source: U.S. Board of Governors of the Federal Reserve System, Moody's Economy.com, Bank of America, JPMorgan as of 7/31/2022

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Real Estate – Strategy

- Continue primary focus on income producing core real estate to achieve results between stocks and bonds through core separate accounts and open-end funds. ARMB's managers have produced attractive results.

- Seek to add core properties where returns are attractive and will add diversification to overall portfolio. Staff will also continue to evaluate non-core opportunities.

- Portfolio is expected to continue to be overweight to apartment and industrial assets going forward.

- ARMB has attractive fee levels on both private core real estate and internally managed REIT portfolio.

as of June 30, 2022	ARMB NAV $millions	Core Weight	1 Year Income	1 Year Total	5 year Income	5 year Total	10 year Income	10 year Total
UBS Separate Account (net)	691	41%	4.67%	29.77%	4.42%	12.20%	4.44%	12.92%
Sentinal Separate Account (net)	317	19%	4.55%	36.09%	4.72%	13.22%	4.71%	11.55%
BlackRock Core Property Fund (net)	435	26%	3.21%	26.54%	3.45%	10.17%	3.69%	10.50%
JPM Strategic Property Fund (net)	198	12%	2.69%	27.48%	2.79%	8.75%	3.51%	9.95%
UBS Trumbull Property Fund (net)	42	2%	3.02%	23.50%	3.37%	5.30%	3.63%	6.98%
NCREIF ODCE Value Wt (net)				28.31%		9.55%		10.15%

Source: Callan and BlackRock (5yr, 10r BlackRock numbers reflect general fund returns and not ARMB results)

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Real Estate – Strategy

▪ ARMB core portfolio is tilted toward sectors with strongest expected fundamentals.

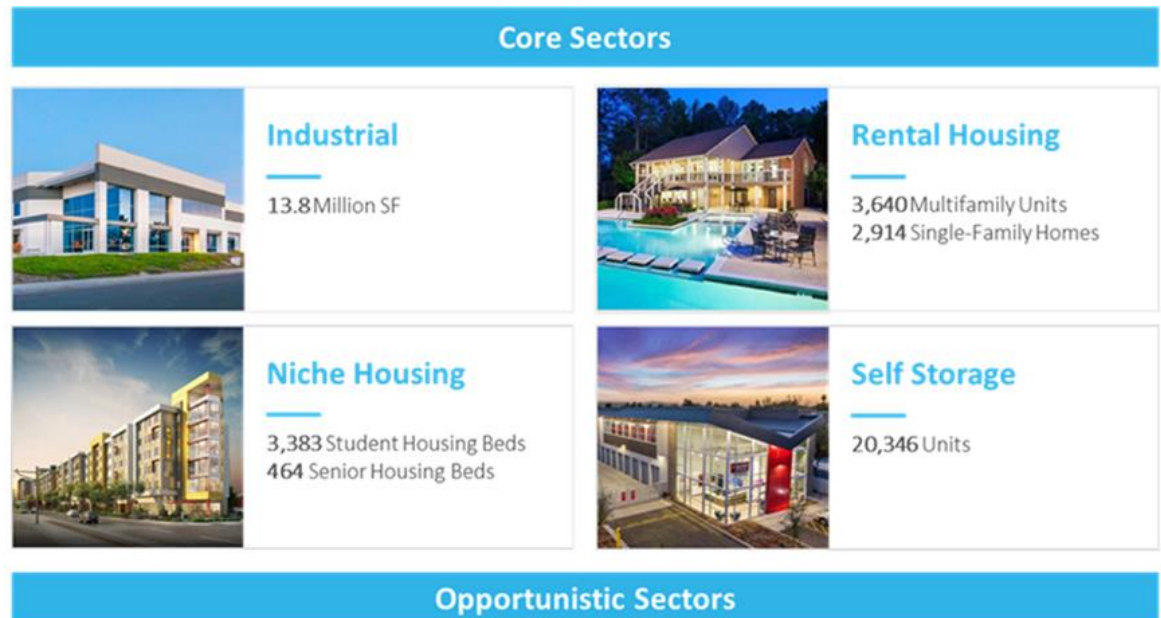ARMB Core Real Estate Sector Weights as of June 30, 2022*
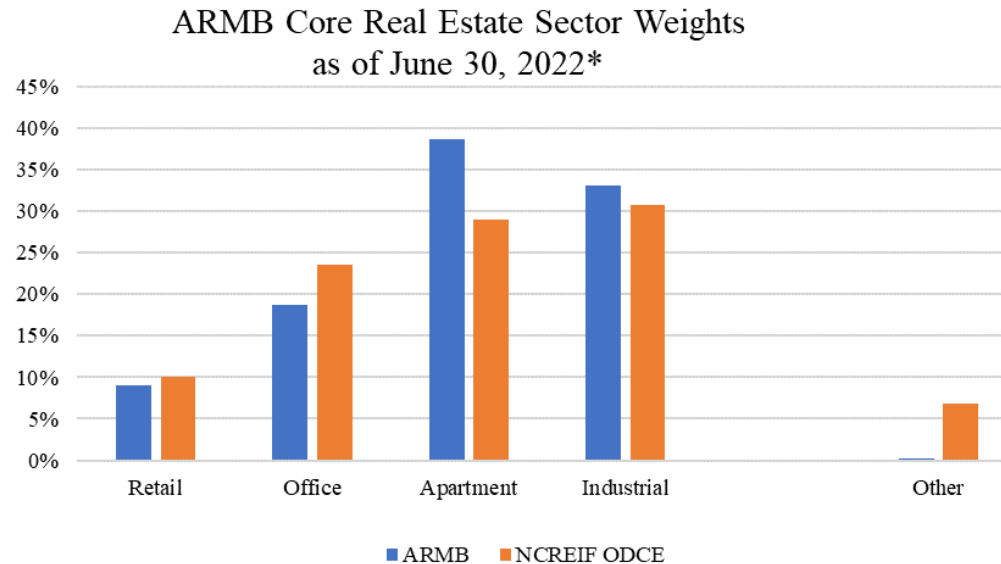
* Chart reflects the combined position of ARMB's core strategies using values reported by Callan Real Assets Consulting as of June 30, 2022, adjusted for UBS acquisition of apartment property in August 2022.

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Real Estate – KKR – Thematic Strategy

- ARMB has invested with KKR since 2014 across a series of closed-end funds.

- KKR invests based on a thematic approach, with a focus on sectors and markets with attractive fundamentals.

- Opportunistic strategy that invests in cash flowing transitional assets, real estate companies and platforms, and distressed situations.

Fund	ARMB Commitment	June 30 value ($000s)	Year	Net IRR	Equity Multiple	Status
REPA	$75 million	3,700	2014	11.5%	1.3	Execution Stage - Late
REPA II	$25 million	12,700	2017	27.0%	1.6	Execution Stage - Mid
REPA III	$50 million	18,900	2021	18.4%	1.1	Investment Stage

Core Sectors

Industrial
13.8 Million SF

Rental Housing
3,640 Multifamily Units
2,914 Single-Family Homes

Niche Housing
3,383 Student Housing Beds
464 Senior Housing Beds

Self Storage
20,346 Units

Opportunistic Sectors

Net Lease
7.6 Million SF

Data Center
55 Properties

Lodging
8,062 Keys

Innovation Office
1 Property

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Real Estate – Almanac Real Estate – Growth Capital Strategy

- ARMB has invested with Almanac since 2004 across a series of closed-end funds.

- Almanac provides growth capital to real estate operating companies across property sectors.

- Structure of investment is income focused and defensively positioned by predominantly using debt and preferred equity structures to invest. Active governance is also used to manage.

Fund	ARMB Commitment	June 30 value ($000s)	Year	Net IRR	Equity Multiple	Status
ARS 4	$50 million	-	2004	9.4%	1.5	Fully realized
ARS 5	$30 million	49	2008	11.7%	1.5	Final Windown Stage
ARS 7	$50 million	31,500	2014	12.6%	1.4	Execution Stage - Late
ARS 8	$50 million	27,000	2018	16.0%	1.3	Execution Stage - Mid
ARS 9	$50 million	300	2021	N/A	N/A	Initial Investment Stage

Industrial
367 Properties | 22.8m SF | $3.2bn GAV

Self-Storage
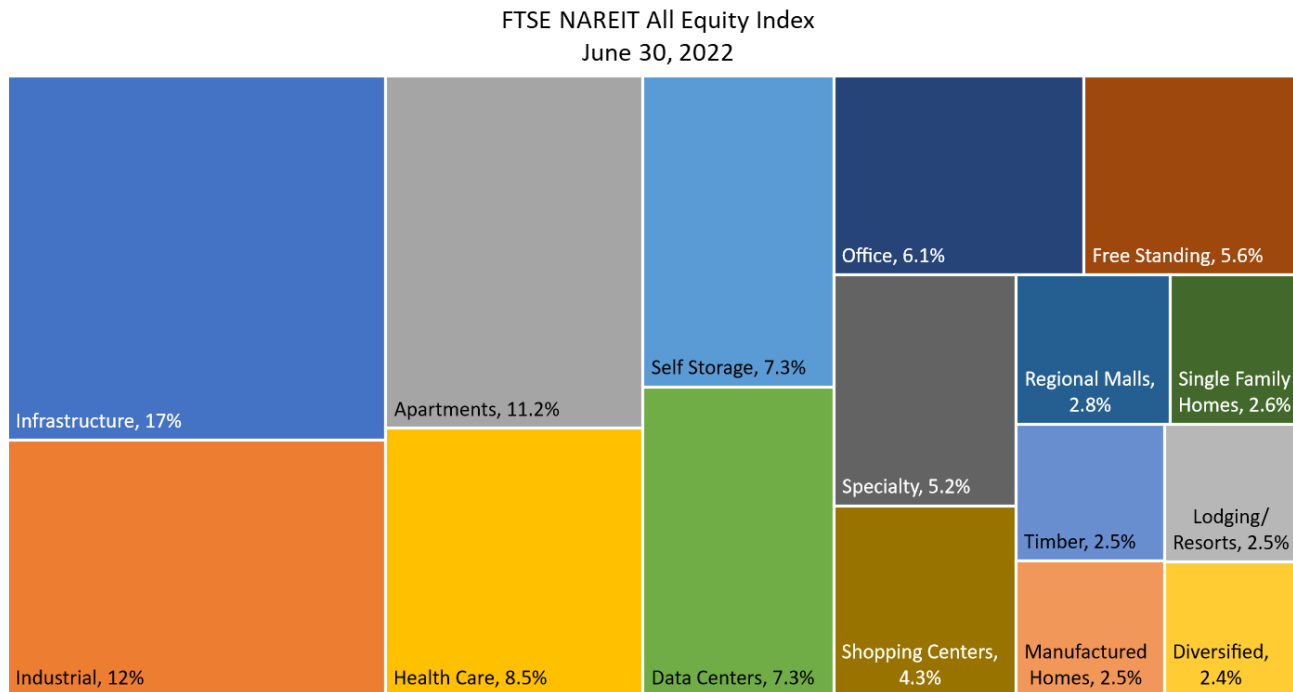27 Properties | 33,192 units | $1.0bn GAV

Multifamily/Senior Housing/Hotel
235 Properties | 42,844 units | $11.5bn GAV

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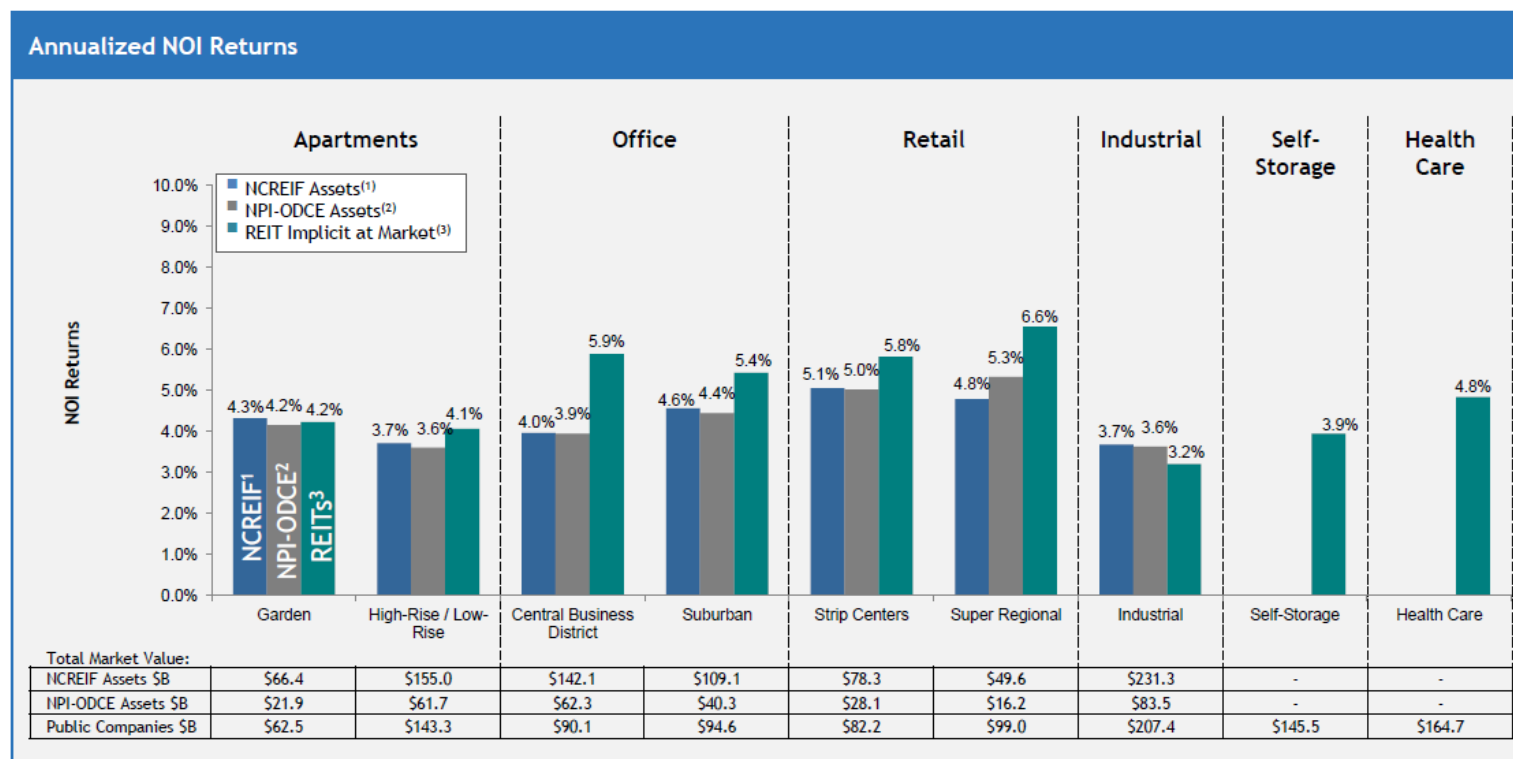
Real Estate Portfolio – REITs

- REITs provide diversification and attractive returns over the long-run.

- FTSE NAREIT All Equity Index is a good reflection of ARMB's Real Assets strategy including timber and infrastructure-like sectors.

- Index is comprised of 151 companies with a dividend yield of 3.4%.

FTSE NAREIT All Equity Index
June 30, 2022

| Infrastructure, 17% | Apartments, 11.2% | Self Storage, 7.3% | Office, 6.1% | Free Standing, 5.6% |
| Industrial, 12% | Health Care, 8.5% | Data Centers, 7.3% | Specialty, 5.2% / Shopping Centers, 4.3% | Regional Malls, 2.8% / Single Family Homes, 2.6% / Timber, 2.5% / Lodging/Resorts, 2.5% / Manufactured Homes, 2.5% / Diversified, 2.4% |

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Real Estate Portfolio – REITs

- REITs provide exposure to real estate sectors at attractive valuations compared to private markets.

Annualized NOI Returns

Legend:
- NCREIF Assets[1]
- NPI-ODCE Assets[2]
- REIT Implicit at Market[3]

Total Market Value:	Apartments		Office		Retail		Industrial	Self-Storage	Health Care
	Garden	High-Rise / Low-Rise	Central Business District	Suburban	Strip Centers	Super Regional	Industrial	Self-Storage	Health Care
NCREIF Assets $B	$66.4	$155.0	$142.1	$109.1	$78.3	$49.6	$231.3	-	-
NPI-ODCE Assets $B	$21.9	$61.7	$62.3	$40.3	$28.1	$16.2	$83.5	-	-
Public Companies $B	$62.5	$143.3	$90.1	$94.6	$82.2	$99.0	$207.4	$145.5	$164.7

Source: NCREIF, SNL, Security Capital.
Note: NAREIT and NFI-ODCE data updated quarterly, on a lag after each quarter-end.
(1) NCREIF Property Index (NPI) data as of December 31, 2021.
(2) NPI properties held in ODCE funds (NPI-ODCE) data as of December 31, 2021.
(3) Public market implicit NOI returns reflect March 31, 2022 equity pricing. Security Capital models isolate implied NOI return based on expected next 12 months NOI, from public disclosure. Public universe generally represents companies comprising the WILRESI index.

Source: Security Capital

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Real Estate Portfolio – Fiscal Year 2023 Plan

Core

- At 36.3% allocation is slightly above target.

- No additional separate account allocations are needed for Fiscal Year 2023. UBS has $65.5 million and Sentinel has $66.8 million of remaining allocation. Financing and sales proceeds may provide additional allocation to invest in new opportunities.

- Discontinue reinvestment in BlackRock Core Open-end Fund due to overweight condition in core.

- Continue to monitor open-end fund universe for possible addition to portfolio if allocation capacity presents.

Non-Core

- Consider non-core strategies selectively to provide alpha opportunities to portfolio.

- Capital is still being invested by KKR and Almanac from most recent fund commitments.

REITs

- Maintain investment in passive diversified approach.

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Farmland Portfolio

- Investment manager makes investments on a discretionary basis within the parameters defined by the ARMB's guidelines and annual investment plan up to approved allocations.

- Portfolio is composed of U.S. farmland. Strategy is a leased-based approach targeting both row crops and permanent crops. ARMB owns 100% of the assets. Portfolio is currently 100% leased.

- The farmland portfolio target benchmark is the NCREIF Farmland Index reweighted to reflect 80% row crops and 20% permanent crops.

Farmland Portfolio
June 30, 2022

- Total Net Asset Value: $964 million

- Number of Assets: 88

- Total acres: 144,987

- Number of states where investments are located: 15

- Row/Permanent Crop Distribution by MV: 87%/13%

Strawberries, California

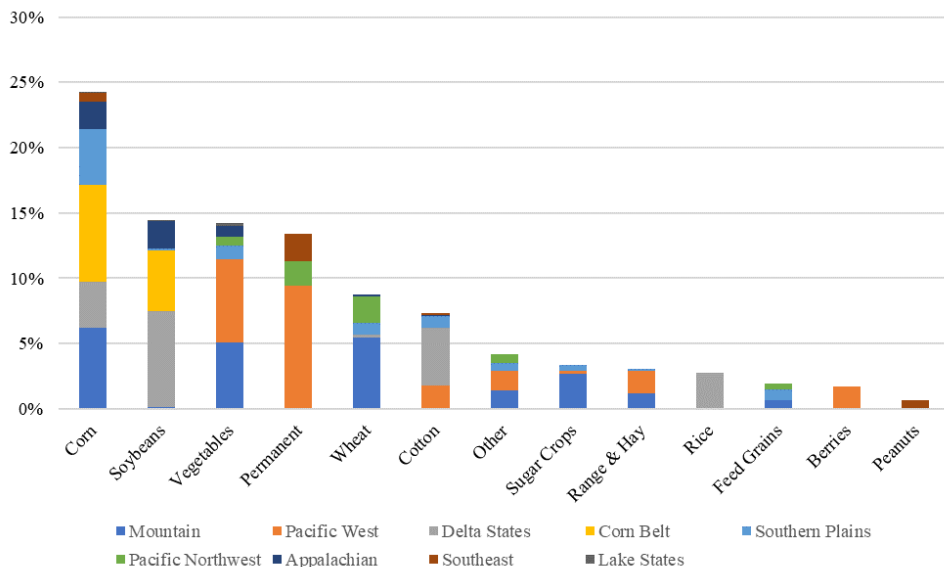Wine Grapes, California

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Farmland Portfolio – Performance

- Historical returns have met objectives with attractive mix of income and appreciation.

- Portfolio is U.S.-based and well diversified by crop type and region.

- No leverage is used in portfolio construction.

- Longer-term underperformance compared to the benchmark is due to an underweight to permanent crops. UBS will be looking to add permanent crops with the additional allocation.

ARMB Farmland Returns
Net returns as of June 30, 2022

Legend: Income, Appreciation, Total, NCREIF (80/20) Benchmark
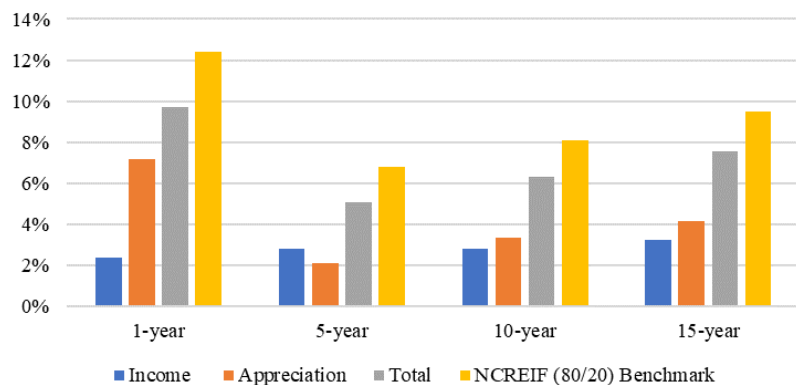
ARMB Portfolio Crop Type by Region

Legend: Mountain, Pacific West, Delta States, Corn Belt, Southern Plains, Pacific Northwest, Appalachian, Southeast, Lake States
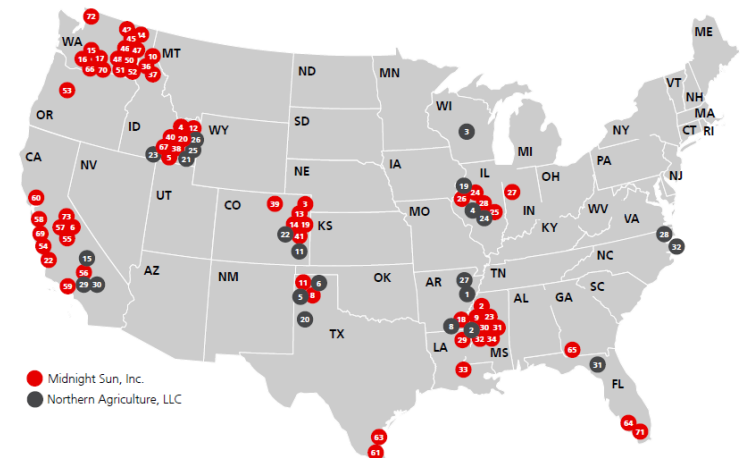
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Farmland Portfolio – Fiscal Year 2023 Plan

- UBS currently has $100 million of allocation to invest.

- Staff will work with UBS to manage additional allocation commitment with investment pace to achieve target allocation over time.

- No additional board action is required. CIO has discretion to add allocation as needed.

- Continue leased-based strategy targeting 80% permanent crops and 20% row crops.

ARMB Portfolio by Crop Type
as of June 30, 2022

13.4%

86.6%

■ Row ■ Permanent
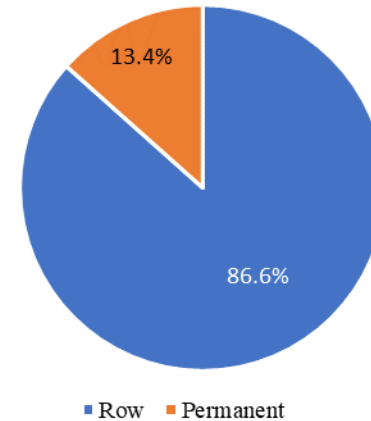
Midnight Sun property location map
(Unaudited)

Midnight Sun, Inc.
Northern Agriculture, LLC

Alaska Retirement Management Board

Timberland – Portfolio

- Investments are made on a discretionary basis within the parameters defined by ARMB's guidelines and annual investment plan up to approved allocations.

- ARMB allocation is fully invested at current size.

- Portfolios are composed of U.S. timberland. ARMB owns 100% of the assets.

- ARMB portfolio is diversified and well positioned to benefit from building product demand with 68% of portfolio in the U.S. South.

- No leverage is used in portfolio construction.

Timberland Portfolio
June 30, 2022

- Total Net Asset Value: $380.9 million

- Number of Assets: 17

- Total acres: 154,960

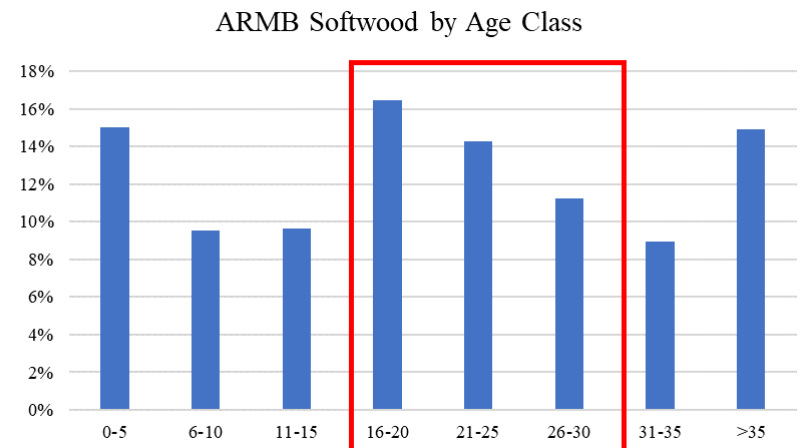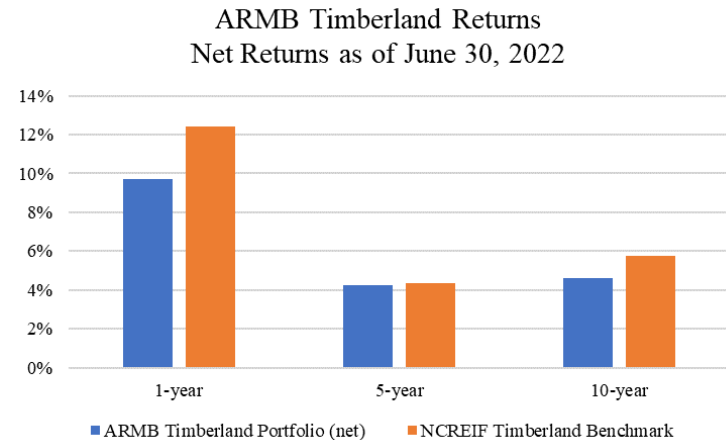- Number of States where investments are located: 11

Source: Timberland Investment Resources, LLC

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Timberland Portfolio – Performance and Fiscal Year 2023 Plan

▪ Sector returns have not met original 5% real return expectations, but current market trends are positive, and sector is still considered attractive within the context of a diversified Real Assets portfolio. Valuations imply net IRR of 8%.

▪ Timberland returns have been frustrated primarily by lack of growth in sawtimber prices. Sawtimber prices are expected to continue to recover as demand is buoyed by home construction and supply is reduced from lower imports. A meaningful part of ARMB portfolio will be transitioning to higher value sawtimber in the coming years.

▪ Strategy is to stay the course with current portfolio as it provides inflation hedge and higher return opportunities through retail land sales and other higher and better use opportunities.

▪ Project Pearl strategy contract will be terminated and assets will be managed as part of timberland portfolio going forward like other HBU opportunities.

ARMB Timberland Returns
Net Returns as of June 30, 2022

■ ARMB Timberland Portfolio (net)   ■ NCREIF Timberland Benchmark

ARMB Softwood by Age Class

Alaska Retirement Management Board

Infrastructure Portfolio

- ARMB is invested in two open-end private investment funds, sponsored by J.P. Morgan and Industry Funds Management (IFM).

- Investments are focused on essential core public infrastructure that are both regulated and unregulated. Assets include regulated water, regulated electricity, airports, pipelines, toll roads, and ports. Target return is 8 – 12% net with a high cash yield.

- Portfolio is well diversified with a mix of GDP sensitive assets and regulated or contractually based assets which often include inflation pass-through features.

- ARMB infrastructure portfolio mix is 18% JPM and 82% IFM. While both funds are attractive investments, this mix has produced beneficial results so far with greater exposure to GDP sensitive assets and better cost economics for ARMB.

Infrastructure Portfolio Profile
June 30, 2022

- Total Net Asset Value: $797.3 million

- Number of Company Investments: 42

- Total Combined Fund NAV (all investors): $70.9 billion

Koole Terminals, JPM

Third Coast, JPM

GCT Container Terminals, IFM

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Infrastructure Portfolio – Performance and Fiscal Year 2023 Plan

- ARMB portfolio performance has been good. Both funds have benefitted from focus on cash yield and organic growth opportunities from existing companies in the portfolio.

- Current portfolio discount rates are attractive compared to risk free rates. They have not compressed like other asset sectors. The current weighted average discount rate for assets in the portfolios is approximately 10%.

- Both IFM and JPM have large current entry queues from investors. This benefits ARMB as the funds grow and diversify from additional investments.

- Discontinue reinvestment in JPM Infrastructure Investment Fund due to overweight condition in infrastructure.

- Expect standalone energy portfolio will continue to wind down.

ARMB Infrastructure Returns
Net Returns as of June 30, 2022

■ Infrastructure Portfolio (net)   ■ CPI + 4%
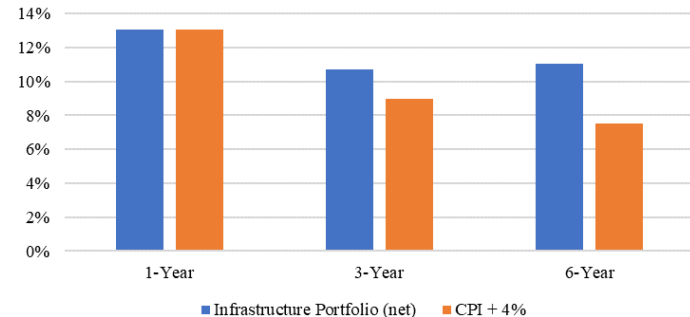
Sydney Airport, IFM

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Real Assets – Fiscal Year 2023 Recommendations

Real Estate	- No additional separate account allocations are needed for Fiscal Year 2023. UBS has $65.5 million and Sentinel has $66.8 million of remaining allocation. Financing and sales proceeds may provide additional allocation to invest in new opportunities. - Discontinue reinvestment in BlackRock Core Open-end Fund due to overweight condition in core. - Consider non-core strategies selectively to provide alpha opportunities to portfolio. - Maintain REIT investment in passive diversified approach and use as asset class rebalancing tool. - Continue to consider the non-qualified fund option for JPM Strategic Property Fund to harmonize real estate exposure between pension and healthcare/DC trusts. - Monitor open-end fund universe for possible addition to portfolio if allocation capacity presents.
Farmland	No additional separate account allocation is needed as UBS has $106 million of allocation to invest.
Timberland	- No strategy changes recommended. - Project Pearl strategy contract will be terminated and assets will be managed as part of timberland portfolio going forward like other HBU opportunities.
Infrastructure	- No strategy changes recommended. - Discontinue reinvestment in JPM Infrastructure Investment Fund due to overweight condition in infrastructure.